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AUTHOR Lionberger, Herbert F.; Wong, Tso Sang
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ABSTRACT

Growing concern that the Cooperative Extension Service was failing to adequately reach small farmers with education materials through regular extension channels led to the implementation of Missouri's Small Farm Family Program. In this program, education assistants, many of whom are small farmers themselves, link the educational resources of the land grant university with the small farmer in his own social system. In 1977 questionnaires were given to education assistants to determine the personal qualities that have a bearing on the education assistant's capability as an intermediary, and the methods of operation utilized by the assistant. Of the 34 responding, most approximated the characteristics of their clients in 4 respects: sex, age, occupation and educational level. Satisfaction from helping people ranked as the primary source of job motivation: money ranked next to last. The education assistant's relationship with clients was personal, interactive, and empathetic. Visiting and listening were the activities stressed most highly (82%), followed by making clients aware of the help available from regular extension sources and government agencies. Finding people at home, the personal problems of clients, deficiencies in the assistant's own knowledge of how to motivate and work well with people, and lack of concern on the part of the client were some of the difficulties listed. Also listed and evaluated were the types of information obtained from the various university sources. (DS)

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LINKING ROLES OF EDUCATION ASSISTANTS IN THE MISSOURI SMALL FARM FAMILY PROGRAM AT THE UNIVERSITY RESOURCE SUBSYSTEM CLIENT SOCIAL SYSTEM INTERFACE

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Herbert F. Lionberger and Tso Sang Wong*

This paper is concerned with the linking roles and capabilities of education assistants at the interface between the university as an informational resource system and small farmers in their own social system. The focus is on the Small Farm Family Program in Missouri. Historically the program was informally tried in 1969 and on a pilot basis in 1972 and officially recognized and financed since 1976 as a response to a generalized and growing concern of failures of the Cooperative Extension Service to adequately reach small farmers with educational material through regular extension channels and as an attempt to minimize the ultimate social and economic consequences of a "have not" segment of the population falling behind the "haves."

Like other extension programs in land grant universities this one was to draw on the university as the major informational resource base. An implicit assumption was that there was a body of information from which a portion useful to small farmers could be abstracted, and subsequently diffused to them given an appropriate interface between the two social systems. It was further assumed that modifications in the conventional linking arrangement would be required.

I. The Social System Context of the Linking Problem

In a continuingly modernizing agriculture there must be new informational inputs for which individual invention will not suffice. Institutionalization

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* On the staff of the Department of Rural Sociology, University of Missouri, Columbia, Missouri.

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of change and assured technology even for small farmers is needed if the gap between the haves and have nots is not to increase beyond tolerable proportions. Even more than for large scale agriculture the small farmer must depend on the public agricultural research and extension system for the specialty information and technology he needs. Although in societies where big-little splits among farmers exist with the informational output more likely to be oriented to big farmer needs, there are always outputs that are in some degree suited to small farmers and from which they can benefit. Aside from informational inadequacies there are also social system and operational inadequacies that must be addressed in maintaining the appropriate interface.

Like in all situations where science based specialty information is needed there must be a continuing transformation of tried and locally tested information derived from an ever expanded basic science knowledge base. This transformation sequence takes on the semblance of steps described in the vertical "Theory to Practice Continuum" graphically illustrated in Figure 1. In order for this transformation and flow to happen certain functions (enumerated across the top of Figure 1) must be performed. Some of these functions require specialized subsystems and specialists with appropriate skills to carry out the necessary activities. Thus, for the innovation and validating (local adaptive testing) functions to occur, specialists with research skills and specialty equipment working in their own support system are needed. Likewise dissemination (farmer education) requires other special skills and a uniquely suited social subsystem. Finally the farmer in his own social system must fit new inputs from a variety of sources into his own farming operation to achieve family and individual goals. This fitting in process constitutes the integration function (Lionberger 1974). When the communication gap between the highly specialized professionals in the dissemination system with

mostly masters and Ph.D. degrees, and the economically disadvantaged small farmers with a grade or high school education becomes too great and understanding and trust between the two declines to a low level, the interface becomes an impediment to information flow and use. This appeared to be the condition out of which the experimental small farmer program emerged and reached its current operational level. The current state of development is subsequently described in this paper.

Reasons for the interface impasse reside (1) in the mode of operation within the information disseminating (extension) system, (2) the inappropriateness of the information and technology (specifications for goal achievement) normally produced by and delivered by the research subsystem and (3) in the capability of the professional staff to serve in the linking role capacity. With this in mind we turn briefly to requirements presumed to be needed to mitigate or remove the interface impasse. After this, attention is directed to how these are addressed in the Missouri Small Farm Family Program.

II. Bridging the Gap of the Communications Impasse

One troublesome impasse centers around the long term consequence of the knowledge gap hypotheses (Tichenor, 1970). Where extension operates on a voluntary democratic basis with educational services reduced on a "come forth and choose"basis, those in least need of help gain more and end up relatively better off than before. A selective process operates which virtually assures that the already knowledgeable become proportionately more knowledgeable than the "not so knowledgeable." The net result is a broader gap between "knowers" and "not knowers". This seems to happen even when programs are designed for the "not so knowledgeable" under conditions of free public access unless (1) some formal constraint is placed on the entry of the "haves" into the program

or (2) the program is so designed that it differentially attracts the "have nots" and thus eliminating the "haves" by chance on their part (Shingi and Mody, 1976).

A second requirement is a body of knowledge suitable to small farmer needs that can be transmitted through the system. Where the information is differentially oriented to the needs of other clienteles, e.g. the "bigs" some means of selectivly choosing and adapting bits and pieces of the new knowledge to small farmer needs is necessary.

Third the professionals who are positioned at the university resource-client system must be capable of communicating information to clients and obtaining feedback from them. The constraints which develop may reside mostly in (1) the personal qualities of the linking agent last in line from the research source to the user (2) the way they operate in their intermediary position. For the first application of homophily-heterophily principles in selecting farm advisers is needed. (Rogers and Bhomik, 1970-71). Second, the mode of operation needs to be such that information transformation process is facilitated.

These general features with reference to the Missouri Small Farm Family Program are in turn examined.

III. The Client Selection Process

As the small farmer program was expanded to geographic areas beyond the initial pilot projects (1972) initiation of new programs were preceded by interviews with farmers designated as low in comparison to others in the locales selected for program implementation. A part of the information obtained in these interviews allowed for differentially verifying those who by total productive output would qualify as being small. By rather objective means a list was

prepared of those for whom help could properly be rendered in the small farmer program as it was then constituted . All on the list had to meet the generalized requirement of being small by comparison to others in the area. Expression of an interest in expanding and/or improving their farming operations was one important consideration; also indication of a desire for obtaining help in doing so. The survey and the selective list thus provided a formal mechanism for disproportionately selecting the "littles" over the "bigs." Most likely an information selection process differentially favoring the "smalls" also operated. The very nature of the program made it more attractive to the "littles" than the "bigs." Also to the extent that there was a big-little farmer consciousness in the respective areas, addition of clients by referral, mostly by other small farmers would tend to disproportionately select and inlist "smalls" over "bigs". It was in this context of determining eligibility that client selections were initially made and subsequently added.

Response to questions answered in the questionnaire to all education assistants in the small farmer program provide additional clues on how selections were made. These responses (See Table 1) indicated that being on the list was still a consideration in a majority of the cases for selecting clients with whom they were and intended to work; less perhaps than in the initial selection. As of old most emphasis was placed on requests for help. Over two thirds said this was very important. But in contrast to days past, selectivity operated in the context of farmer's operationally defined as small.

Also within this context selectivity was heavily in terms of criteria indicative of likely success in achiving these expansionist goals, e.g. physical ability to do the work required, available work force, motivation

(desire to increase farm income and own estimate of ability to do so - see Table 1). At the same time how realistic the help requested was in terms of the client's own resource base to do so was considered.

Notably absent in the selection process were the predominance of considerations that might be personally advantageous to the education assistants, e.g., distance from home and how close the prospective clients interests coincided with their own.

IV. The Support System of the Paraprofessional

Education assistants operate in geographic areas of assigned responsibility under the direction of a family resource management specialist and a far management specialist designated by the university based governing board, as responsible for the Small Farm Family Program in the receptive districts. Each is fortified by the voluminous Guide Sheets available to all extension workers. These consist of a carefully indexed continually updated volume covering subjects that farm families are most likely to inquire about.

In addition they are provided with specially prepared small farmer guide sheets in which information from the university resource system is abstracted and specially prepared for the use of small farmers. e.g. one on how to take care of one sow. Weekly one half to one-day conferences are held in which the two extension subject matter specialists and fellow education assistant colleagues meet to discuss their problems. These meetings provide a mechanism for selectively obtaining from the University support system information likely for use on specific farms. At the same time these weekly sessions are used to help education assistants obtain information about farm enterprises likely to be in demand on small farmer farms.

IV. Paraprofessionals As Linkers

The 34 education assistants who completed the questionnaires in the study comprised nearly 95% of those employed during the fall of 1977 when the study was done. Each under the direction of a farm management specialist and a family resource management specialist designated to be in charge of the program within the districts worked extensively with 40 to 50 clients on a one-to-one basis.

With capability to operate as an effective intermediary at the farmer-university resource system interface, as the central concern we look at (1) the personal qualities of the education assistants that either have a bearing on or which are indicative of this capability and (2) how they operate at the farmer social system university informational resource subsystem interface.

Personal Qualities and Attributes of the Educational Assistants

Of central concern here are homophily-heterophily qualities in relation to clients and selected perceptual variables. First we take note of the homophilous qualities that enhance information flow. Although homophily increases accuracy of communication and the ease with which it takes place, there must be some differences (heterophily) between the educational assistant and their clients. Rogers and Bhomik (1970-71) suggest that the best combination is for farm advisors and farmers to be homophilous on all personal qualities except for the information they possess.

This is an underlying consideration in the employment of paraprofessionals to serve at the interface closest to the client in the information development delivery-feedback system. In addition to being from the same general geographic area in which they work and thus cognizant of conditions that exist there, all education assistants in Missouri had been farmers and over 85 percent still were. Aside from the homophily issue some role combinations for farm advisement are functional and

and some disfunctional. The one that seems to be universally and cross culturally functional is the farmer-farm advisement combination. Being 94 percent male in number and roughly three fourths of them between the ages of 39 and 50, they approximated the characteristics of their clients in yet two additional respects. With an average of 12 years schooling completed, their educational level was likely not greatly different than their clients.

What by objective evidence is and what is thought to be are different things and are not always congruent. Since most people are not good enough actors to hide even offending parts of self, let alone total self (Patton and Giffin 1974, 9) and since communication occurs at least equally through channels other than the planned message (Patton and Griffin 1974, 157-181) what one perceives oneself to be becomes very important. This is particularly true in situations where communication is intimate, interactive and face-to-face as in the educational assistant-small farmer relationships that prevail in the Missouri Small Farm Family Program.

Just as 97 percent of the education assistants think that the clients with whom they work think of themselves as small farmers, a very sizeable (88.2 percent) likewise regard themselves as being small farmers. Thus they identify closely with their clients. No doubt this is one reason why such a high percentage of them said they enjoyed associating with each other, indicated they understood and sympathized with their client's problems, and felt very much at home working with them. (See Table 2)

Another type of perceptual variable indicative of interface potential is the rewards they perceive coming from their work. Two thirds work more than 40 hours per week even though they don't have to and get no overtime pay. Eighty-five percent work evenings and 73.5 percent weekends. Supervisors voice frequent opinions that education assistants are grossly

underpaid for what they do. What then are the rewards that sustain them in this work. As it may quite generally be in extension work (Lionberger and Reddy,1976), satisfaction that comes from helping people may be the chief propellant. Thus from Table 3 we see that education assistants put "Pleasure you get from helping others" at the top of the list. Second on the strong plus list was "Chance to learn while you work" and third "The importance that education assistants attached to their work." Lowest on the plus list was the money they made. Almost as low as lowest was the job it may lead to. Thus pay and upward mobility were not important motivating forces in this situation. Now from qualities that may be expected to enhance communicative effectiveness, we turn to actual performance on the job.

The Educational Assistant's Work in the Field

Role Performance. The mean number of farmers with which they worked was 44. Although only 40 hours per week was prescribed, 68 percent worked more than that amount and 85 percent worked evenings. Their relationship with clients was perso intimate, interactive and empathetic. The activity stressed very much by the highest percentage (82.4) of the education assistants was visiting and listening to their clients. (See Table 4). Second in order were making them aware of regular extension sources and government agency sources available to them. Third and very much stressed by 61.8 percent of the education assistants was noticing and expressing recognition for achievements made by clients. The emphasis on personal attention extended to encouraging clients to make personal telephone calls to the education assistants home Also much or very much emphasis was placed on trying to get the family involved in setting goals and considering alternatives (75.3%) and encouraging clients to visit with and talk to each other.

Such personalized services as helping clients get credit if and as needed and either teaching of or providing skills needed took precedence over the use of mass media channels.

Perceived Small Farmer-Big Farmer Differences. Compared to working with big farmers the respondents thought more on-farm personal contacts were needed for working with small farmers. Nearly 80 percent said more. (See Table 5). Almost as n said more effort directed to working with clients as families and 67.6 percent helping them get the credit, services and supplies they need to achieve their goals. On several other help activities they thought the need was much the same and for one a sizeable number (17.6 percent) thought avoidance should be the rule. This was doing things for them for which they lack skills. For use of written educational materials the preponderant view was about the same amount of effort was needed. Thus, the general reaction was one of more intensive work on a person to person basis with small farmers than large farmers, with this help also to include concern with personal problems.

Other Perceptual Considerations. Again certain perceptual matters that affect ability of education assistants to make the interactive information delivery-feedback linkage between the University resource subsystem and the farmers own social system need to be examined. These include the education assistants' reference group identification, their perception of their advisor-client relationships, the perceived usefulness of what they do or supply their clients to assist them in achieving their own goals and finally what they perceive as major constraints in performing their in field duties.

Reference Group Influence. In the in-between university resource-client social system position of education assistants reference group identification and deference to one or the other become important determinants in how

education assistants work and on what effect their efforts have on clients. Being in the middle and somewhat marginal also to the in-between information disseminating system they had a number of choices as to whom they could defer. This becomes especially relevant in cases where conflicts in program specification occur. Research indicates that those who defer to clients rather than program administrators do the best job (Dubey and Gallup, 1962, and Preiss, 1954).

An indication of the deference inclinations of the education assistants was obtained by asking them to indicate on a 5 point none to very much scale how much they thought their work was influenced by several position incumbents to whom they were expected to relate in their own extension related position. These included the area director, farm management specialists, small and influential farmers in the area, other education assistants and the County Courts, the last of which has important inputs into extension support locally. It is neither surprising nor discouraging that most influence is attributed to farm management specialists (58.9 much or very much) because of the closeness with which they work including the one half to one day work sessions together considering specific small farmer problems encountered in the field and how to work with them. (See Table 6). But next highest "much or very much" influence was attributed to the small farmers with whom they work (38.5 percent). The reader will also recall that 85.2 percent of the education assistants regarded themselves as being small farmers. Least influence is presumed to come from the County Court which is little concerned with day to day operations of the small farm family program and influential farmers in the community but not associated with the Small Farm Family program. As might be expected, they were influenced in considerable degree by fellow education assistants with whom they interact frequently.

Relative Importance of Education Assistance Techniques. In regard to what they see as being high on the list of what they do to help small farmers achieve their goals, a number of things emerge as very important (see Table 7). The specific question referring to 9 commonly used "assists" was "How important or unimportant do you regard each of the following in your efforts to help small farmers achieve their goals?" Although close personal involvement with clients got the most very much votes (64.7 percent) several were in the 50 percent or more range, often with many more additionally rating the assist" as of much importance. (See Table 8). These in their descending order on the very much vote were "Answers you help them find," "Publications from the university" and "The information you give them directly."

The two highest on the "much" listing were "the thinking-planning induced as a result of the educational assistant's involvement with them (52.9 percent) and the help given them in either finding resources they didn't know about or didn't know how to get if they knew about them (52.9 percent).

Problems Assessment. Finally, in regard to the education assistants work with their small farmer clients by far the most frequently reported "continual or very frequent" problem reported was finding people at home. Over 29 percent gave this response. (See Table 8). Next in order at this magnitude level was personal problems of clients (14.7 percent).

In the "often-sometimes" range difficulties reported were heavily lodged in the information base from which education assistants operated. This included both information suited to small farmer needs and that needed by the education assistants themselves. Lack of time, deficiencies in own knowledge on how to motivate and work with people and lack of concern on the part of clients completed the list of "often or sometimes" reported difficulties.

Lack of support from the regular extension staff was placed in the "no

problem" category by 91.2 percent of the education assistants and in the "sometimes" category by the remainder. However, lack of local support for the program and local self interests that stand in the way were sometimes cited as problems.

Linkages with the University Resource Subsystem

The second part of the linking arrangement for education assistants is with the university resource system largely represented by area subject matter specialists serving as intermediaries and with other informational sources not associated with the university.

Contacts with Area Subject Matter Specialists. As can be seen from Table 9 the greatest number of contacts were with farm management specialists (5.56 per month). This suggests that consultations were more frequent than the regularly scheduled monthly meetings. Contacts with livestock specialists ranked second (3.65) and with agronomy specialists third (3.00). Fourth in line were the designated family resource specialists. With interaction among other education assistants also frequent it was apparent that contacts were not confined by official prescription. Rather, the education assistants acted in a more flexible way and in accord with the nature of the help needed.

Although getting information and advice from subject matter specialists predominated as the main purpose of contact "talk things over" was marked with sufficient frequency to indicate that the relationship was also interactive. Furthermore, relationships with district subject matter specialists were assigned high marks by the education assistants on qualities that make for effective working relationships on a 7-point semantic differential scale (Snider and Osgood, 1969) of paired adjectives representing extremes of qualities on each scale. The average ratings assigned were in the top category for friendliness, helpfulness, being supportive of the Missouri Small Farm Family

Program being considerate, cooperative and understanding and offering encouragement to education assistants in their work. In addition they saw them as generally complementing them in their own work rather than as in competition with them. They expected answers to their technical questions quickly or searches leading to answers and generally got them. Ninety-one to 94 percent expected prompt treatment of requests, on farm visits, if and as needed and that specialists listen to their problems and give suggestions on how to proceed. From 79 to 82 percent obtained what they expected. In a number of cases they obtained more services than they actually requested. In making information requests to an intermediary there is always a question of whether answers will be relayed back through the education assistant or directly to the client. The last seems to have been the rule in the Small Farm Family Program, both in regard to expectations and practice. Less help was expected and received for proposing solutions to personal problems of small farmers.

Attention up to now has focused in the acquisition of information from area subject matter specialists. But there are many others also.

Other Types of Informational Contacts and Linkages. An inventory of what they were, the regularity with which they were used and of their perceived utility are enumerated in Table 11. From this, the prime importance of the area farm management specialist was again exemplified and by comparison the secondary role of other subject matter specialists. The last were generally only occasionally consulted. The occasional and regular use of on campus faculty as sources of information was congruent with the contention of many (70.6 percent) who said they felt that they could go directly to them rather than through official channels. Over three fourths (76.5 percent) in fact indicated they had done so.

Most commonly used channels for regularly getting information from the university resource system were college of agriculture publications (94.1 percent), Agricultural Guide Sheets (88.2 percent) and Small Farmer Guide sheets. Further examination of Table 11 will also show a high proportion making occasional or regular use of Newsletters, government agencies, farm magazines, commercial channels, Home Economics Guide Sheets, telephone calls and leading farmers in the area.

The estimated utility of these sources and channels for providing for the informational needs of education assistants closely parallelled the magnitude of regular use. Thus area subject matter specialists and university publications of a variety of types rated very high on the utility estimate. In fact, the one with the highest "indispensable" designation was College of Agriculture publications (a channel). Agricultural Guide Sheets and Small Farmer Guide Sheets were next in order with 38.2 percent indicating that each was indispensable. This with many others rating them as very important clearly exemplified their central importance as information sources. These printed documents provided references for ready repeated use.

VI. CLIMATES OF OPINION

In Regard to Program Support

As with most activities that are in competition for scarce resources to support other programs complaints are sometimes registered by those in the favored position or by members of the public who take exception to how public resources are being used. With the more advantaged opposition also often in positions of power as with big farmers over little support for the small farmer could come under quick attack. Some assessment of what potential supporters of the program think is therefore important. A very rough

indication of what this might be was obtained by asking education assistants to indicate how supportive they thought nine outside referents were to the program. Their responses are listed in Table 12.

From these it is apparent that personnel in the extension organization itself were seen as very supportive. These included colleagues not assigned to the Small Farm Family Program, county extension councils, and the area extension councils. County courts more removed from the extension activity and of necessity concerned with a diversity of matters were seen as less supportive but a majority still on the favorable or very favorable side. Only one person (2.9 percent) saw the county courts as unfavorable. Big farmers were about evenly divided on the favorable and unfavorable side but generally without very strong feelings either way. Paradoxically small farmers were seen as either liking the program or disliking it. Few were regarded as mixed or indifferent in their feelings. Thus, 35.3 percent saw them as very favorable, the highest very favorable percent registered for any group. At the other extreme, 20.6 percent saw small farmers as unfavorable to the program, again this was the highest percentage assigned as unfavorable for any group. It may be that this dichotomous view is partially a function of their closer contacts with small farmers than most other elements in the community and of their own ability to work effectively with them. Finally, the climate of opinion among newspaper editors, businessmen and banks were seen as generally favorable. Few were seen as unfavorable to the program. Thus, except for big farmers elements in the area whose opinion were regarded as important were seen as favoring the Small Farm Family Program.

But it would be unrealistic to take this as an entirely valid assessment of the climate of opinion that prevailed. Those who have such strong commitments to the Program as the education assistants will surely selectively

perceive what they see as favorable. But given some miscalculation of latent opposition that may exist, the ability of a few activists to mobilize effort and the disproportionate influence they may have in the community, the presumed favorable climate of opinion could be considerably and quickly shaken.

In Regard to Program Effort

Aside from increasing the farm income of the clients, an end to which the program is heavily directed and in some sense misdirected, a central goal is to "graduate" the clients and in doing so get them to form habits of using regular extension channels available to all. Graduation also implies an ability to manage own affairs without special outside assistance provided by the education assistants and of terminating any dependency relationship that may have been formed between paraprofessionals and individual farmers.

Again as with perceived acceptance of the program by outside referents, change in clients can be judged only in terms of changes education assistants think they saw in the two or more years they had been observing them. Each was asked to indicate how much change they thought had occurred in several behavioral manifestations assumed to accrue from the program effort. The results of their responses are reported in Table 13. Areas where most thought they saw much change were "Interest in improving own situation" (58.8 percent) and "Improved self confidence" (41.2 percent). Also they saw an inclination to make more use of regular extension channels; 35.3 percent saw much chang of this kind. For other matters they saw small changes in the desired direction, ie. in taking the initiative in sizing up and solving some problems, increased ability to make own decisions, more husband-wife involvement in decision making and more involvement in community activities.

VII. SUMMARY AND CONCLUSIONS

Education assistants in the Missouri Small Farm Family Program are homophilous in perhaps the most essential respects for effective communication and the exercise of personal influence. All had been farmers at one time or another and 85.3 percent still were. Of those who still were, 88.2 percent thought of themselves as small farmers. Perhaps of all role combinations conducive to accurate communication and high credibility is the farmer-farm advisor one. Indications were that the education assistant's relationship with small farmers were empathetic, interactive and highly satisfying. The help they were able to render on behalf of their clients was the source of their strongest rewards as paraprofessionals. Second in order was the opportunity that the education assistant position provided to learn while they worked. This was certainly a combination conducive to rendering effective help to clients.

Although more influenced by farm management specialists, under whose direction they worked, more than any one else they were also strongly influenced by their small farmer clientele and fellow education assistants with whom they interacted frequently. Although home management resource inputs were officially provided in the program, informational servicing relationships were heavily to the agricultural resource base.

Their work with clients, mostly personal and interactive, carried very strong components of listening to what they had to say, taking note of and expressing recognition for their achievements. Thus in addition to addressing agricultural production problems and servicing informational needs they served therapeutic, ego enhancing roles. They accordingly placed first what so many "so-called" experts seem incapable of doing. They listened. Another very important role highly stressed was that of making clients aware of help that they could get through regular extension channels and other government agencies.

Although the information and technology (specifications for goal achievement) available via the university resource system were surely much better suited to big than little farmers, the special mechanism of weekly meetings of education assistants and the two subject matter specialists--farm management and home resource management--provided an interactive arrangement for selecting and to some degree adapting what was immediately available or could be made available through the information supply system to meet the special needs of the small farmer clients both collectively or individually. In this sense the weekly discussion meetings between subject matter specialists and education assistants provided an assist for performing the integrating function (Lionberger, 1974) on behalf of clients.

Linkages to the university resource system were many, varied and regularly used. At the most important juncture in the information delivery-feedback macrosystem, namely, between the district agricultural specialists and education assistants themselves, the relationship was interactive. This allowed a questioning, selecting, adapting, fitting into local needs process, approaching the ideal for effective information flow. At this interface the college of agriculture bulletins, the continually updated Agricultural Guide Sheets, and the specially prepared Small Farmer Guide Sheets were also extensively used.

The personal servicing relationship extended also to the campus based specialists. Some education assistants made regular use of the staff and many did so occasionally. Although these relationships were probably initially formed via official channels most said they would have no hesitancy to recontact them directly.

Predominant inter system linkages were not confined solely to the university informational resource system and its intermediaries. Informational inputs also came from a variety of agricultural agencies, commercial sources and farmers, both big and little.

All things considered the manner in which education assistants worked with clients is conducive to increasing self confidence, and use of regular informational channels and management ability. It is also conducive to farming strong personal attachments. These are likely to be difficult and painful for both to break.

The interactive manner in which the information transfer and exchange process operate at the major interfaces in the Program, ie. between the education assistant and small farmer on the one hand and between education assistants and the subject matter specialists on the other, the system carries its own self correcting redirecting mechanism and a potential for governance at the local user level so important for servicing the informational needs of clients. In the interactive arrangements matters not clear can be questioned and clarified and matters perceived to be wrong are likely to be voiced, addressed and corrected to the extent that prescribed constraints will permit. Even these are likely to be questioned and ultimately changed.

Finally, the Program seems to contain the necessary constraints to preclude differential benefits to "bigs" over "littles" that otherwise results in the gap between the two becoming larger.

FIGURE 1. AGRICULTURAL INFORMATION DEVELOPMENT AND FLOW MODEL

FUNCTIONS THAT MUST BE PERFORMED

FROM SCIENCE THEORY TO FARM PRACTICE ROAD

INNOVATION (Research and Development) (VALIDATION) DISSEMINATION Information-Persuasion (Legitimation) INTEGRATION Reinforcement

Governance

RESEARCH

Test theories and add to basic science knowledge

Try to intervene in the scientific process

Invent something potentially useful for farmers

Test it locally to determine whether it
- will work?
- is feasible?
- will fit in?
- will pay?

5. Get it out to farmers

6. Put validated information or invention to use on specific farms.

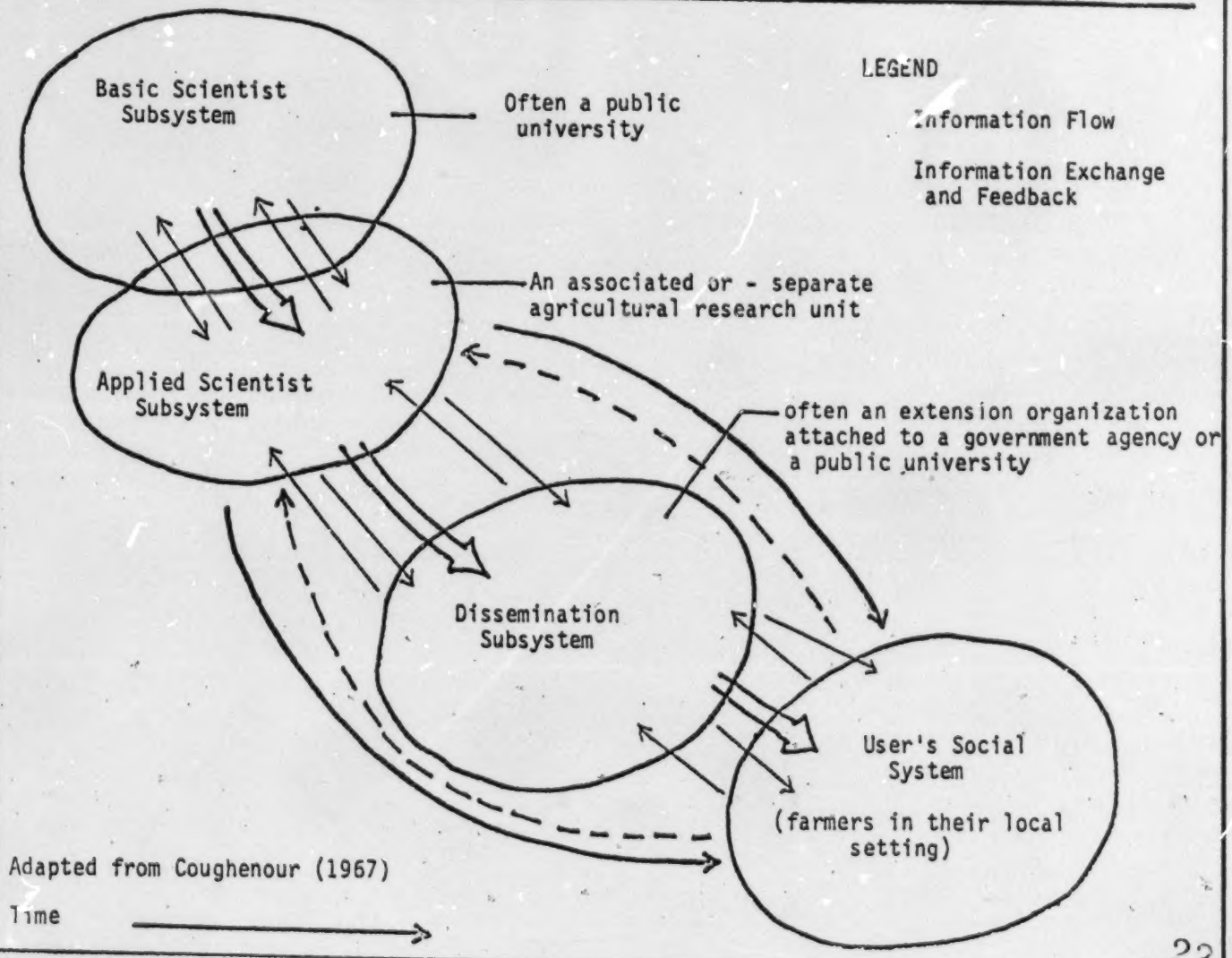
Basic Scientist Subsystem
Often a public university
LEGEND
Information Flow
Information Exchange and Feedback
An associated or - separate agricultural research unit
Applied Scientist Subsystem
often an extension organization attached to a government agency or a public university
Dissemination Subsystem
User's Social System
(farmers in their local setting)
Adapted from Coughenour (1967)
Time

TABLE 1. EDUCATION ASSISTANTS CLASSIFIED BY THE RELATIVE IMPORTANCE THAT THEY ATTACHED TO DESIGNATED CRITERIA FOR SELECTING CLIENTS WITH WHOM TO WORK

Criteria for Selecting Small Farmer Clients	Amount of Consideration Given								
	Total % (n=34)	None %	Very Little %	Little %	Some %	Much %	Very Much %	Don't Know %	No Answer %
Whether they are on the eligible list or not	100.0	17.6	11.8	8.9	17.6	14.7	17.6	5.9	5.9
Age	100.0	41.2	20.6	5.9	17.6	11.8	2.9	0.0	0.0
Specific request for help	100.0	0.0	0.0	2.9	8.8	17.6	67.6	0.0	2.9
Available manpower in the household	100.0	20.6	11.8	14.7	23.5	17.6	8.9	0.0	2.9
Distance from your home	100.0	58.8	17.6	8.9	8.9	2.9	2.9	0.0	0.0
Size of the farm	100.0	17.6	8.8	23.5	32.4	5.9	11.8	0.0	0.0
Whether help requested was realistic	100.0	0.0	8.9	5.9	38.2	14.7	29.4	2.9	0.0
Their off-farm vs. farming interests	100.0	2.9	14.8	11.8	35.3	17.6	11.8	2.9	2.9
How closely their interest coincide with yours	100.0	47.1	8.8	8.8	29.4	5.9	0.0	0.0	0.0
Their physical ability to do the necessary farm work	100.0	14.7	17.6	2.9	29.5	11.8	20.6	0.0	2.9
Whether they were interested in increasing their farm income or not	100.0	2.9	0.0	5.9	23.5	38.3	29.4	0.0	0.0
Your estimate of their prospects for increasing farm income	100.0	5.9	5.9	8.8	38.3	23.5	14.7	0.0	2.9
Personal acquaintance with the prospective client	100.0	58.9	17.6	8.8	5.9	5.9	2.9	0.0	0.0

TABLE 2. EDUCATION ASSISTANTS CLASSIFIED BY VALUES HELD ABOUT THEIR RELATIONSHIPS WITH SMALL FARMERS

View Statements	Amount of Agreement						
	Total % (n=34)	Strongly Disagree %	Somewhat Disagree %	Neutral %	Somewhat Agree %	Strongly Agree %	No Answer %
We understand each other very well	100.0	0.0	2.9	8.8	61.8	23.5	3.0
I understand and sympathize with their problems	100.0	0.0	0.0	2.9	29.4	64.8	2.9
They think I understand and appreciate their problems	100.0	0.0	0.0	0.0	67.7	29.4	2.9
I feel very much at home working with them	100.0	2.9	2.9	5.9	17.6	67.7	3.0
They trust me	100.0	2.9	0.0	5.9	50.1	38.2	2.9
They respect the university and the cooperative extension service	100.0	2.9	0.0	8.8	50.0	32.4	5.9
I feel I am one of them	100.0	2.9	0.0	11.8	26.5	55.9	2.9
We enjoy our association with each other	100.0	2.9	0.0	0.0	17.6	76.5	2.9
I have become their most trusted source of farm information	100.0	0.0	0.0	26.5	52.9	20.6	0.0

TABLE 3. EDUCATION ASSISTANTS CLASSIFIED BY IMPORTANCE ATTACHED TO SOURCES OF JOB MOTIVIATION

Sources of Job Motivation	Importance Attached					
	Total % (n=34)	Negative consider-ation %	Neither plus or minus %	Moderate plus %	Strong plus %	No Answer %
The money you make	100.0	35.3	47.1	14.7	2.9	0.0
The job it may lead to	100.0	32.4	44.1	23.5	0.0	0.0
Pleasure you get in helping others	100.0	0.0	2.9	20.6	70.6	5.9
Chance to learn while you work	100.0	0.0	2.9	29.4	64.8	2,9
Expressions of appreciation from the people with whom you work	100.0	0.0	8.9	44.1	44.1	2.9
The importance you attach to the work	100.0	0.0	0.0	41.2	55.9	2.9
The importance you think others attach to your work	100.0	0.0	11.8	67.6	17.7	2.9
The kind of people you are associated with, all types considered	100.0	0.0	26.5	41.2	29.4	2.9

TABLE 4. EDUCATION ASSISTANTS CLASSIFIED BY RELATIVE EMPHASIS PLACED ON DESIGNATED EDUCATIONAL STRATEGIES FOR WORKING WITH SMALL FARMERS

Educational Strategies	Amount of Stress Given						
	Total % (n=34)	Avoid Doing %	Very Little %	Some %	Much %	Very Much %	No Answer %
Provide them with educational material mostly from the university	100.0	0.0	0.0	5.9	44.1	50.0	0.0
Encourage personal or telephone calls at/to your home	100.0	0.0	2.9	29.4	35.3	32.4	0.0
Teach skills or give help where a particular skill is lacking or deficient	100.0	0.0	0.0	23.5	47.1	29.4	0.0
Help them get needed credit, materials and/or supplies	100.0	5.9	23.5	29.4	26.5	14.7	0.0
Help them with their personal problems either directly or through referral	100.0	2.9	23.5	44.1	11.8	17.7	0.0
Work with them in group meetings	100.0	0.0	29.4	41.3	23.5	2.9	2.9
Try to get family inolvement in setting goals and considering alternatives	100.0	0.0	0.0	11.8	47.1	38.2	2.9
Encourage clients to visit and/or talk with each other	100.0	0.0	11.8	23.5	41.2	23.5	0.0
Notice and express recognition for their achievements	100.0	0.0	0.0	5.8	32.4	61.8	0.0
Conduct demonstrations, tours, field days, etc.	100.0	0.0	29.4	38.2	20.6	11.8	0.0
Use radio, news letters and/or releases from the local press	100.0	0.0	29.4	41.2	14.7	14.7	0.0
Make them aware of the help they can get through the Extension Service, ASC, SCS, FHA offices and the like	100.0	0.0	0.0	5.9	26.5	67.7	0.0
Help them make contacts with agencies from which they can get the help they need	100.0	0.0	0.0	11.8	44.1	44.1	0.0
Visit with and listen to what they have to say	100.0	0.0	0.0	0.0	14.7	82.4	2.9

TABLE 5. EDUCATION ASSISTANTS CLASSIFIED BY AMOUNT OF EMPHASIS RECOMMENDED ON DESIGNATED EDUCATIONAL STRATEGIES FOR WORKING WITH SMALL FARMERS COMPARED TO LARGE FARMERS

Educational Strategies	Amount of Emphasis Compared to Working with Large Farmers					
	Total % (n=34)	Less %	More %	About Same %	Don't Use At All %	No Answer %
On-farm personal contacts	100.0	0.0	79.4	17.7	0.0	2.9
Use of written educational materials	100.0	2.9	29.5	67.6	0.0	0.0
Helping with their personal problems	100.0	5.9	38.2	41.2	8.8	5.9
Doing things for them for which they lack skills-like filling out government forms and vaccinating cattle	100.0	2.9	38.2	41.2	17.7	0.0
Help them get the credit, services and supplies they need to achieve their goals	100.0	0.0	67.6	29.5	2.9	0.0
Working with them in groups	100.0	2.9	47.1	47.1	0.0	2.9
Personal (one-to-one) contacts	100.0	0.0	55.9	44.1	0.0	0.0
Working with clients as families	100.0	0.0	76.5	23.5	0.0	0.0

TABLE 6. EDUCATION ASSISTANTS CLASSIFIED BY AMOUNT OF INFLUENCE THEY THOUGHT DESIGNATED REFERENTS HAD ON THEIR WORK

Designated Referents	Amount of Perceived Influence							
	Total % (n=34)	Least %	None %	Little %	Some %	Much %	Very Much %	No Answer %
Area Director	100.0	5.9	5.8	23.5	32.4	32.4	0.0	0.0
Farm management specialists	100.0	0.0	0.0	14.7	23.5	47.1	11.8	2.9
The small farmers with whom you work	100.0	0.0	2.9	20.6	35.3	26.5	11.8	2.9
Influential farmers in the area, big and small	100.0	0.0	23.5	32.4	38.3	2.9	0.0	2.9
Fellow education assistants	100.0	0.0	5.9	17.6	41.2	29.4	5.9	0.0
County court	100.0	11.8	32.4	23.5	29.4	2.9	0.0	0.0

TABLE 7. EDUCATION ASSISTANTS CLASSIFIED BY AMOUNT OF IMPORTANCE THEY PLACE ON SELECTED EDUCATIONAL ASSESTS FOR WORKING WITH SMALL FARMERS

Educational Assests	Amount of Perceived Importance							
	Total % (n=34)	Nega-tive %	None %	Little %	Some %	Much %	Very Much %	No Answer %
Publications from the university	100.0	0.0	0.0	0.0	8.8	35.3	55.9	0.0
Close personal involvement with clients	100.0	0.0	0.0	2.9	8.8	23.6	64.7	0.0
Recognition expressed for successes achieved by clients	100.0	0.0	0.0	2.9	26.5	26.5	44.1	0.0
Special attention clients get	100.0	0.0	0.0	2.9	26.5	35.3	32.4	2.9
The information you give them directly	100.0	0.0	0.0	0.0	11.8	38.2	50.0	0.0
The answers you help them find	100.0	0.0	0.0	0.0	8.8	26.5	58.8	5.9
Finding resources for help they either didn't know was available or they did't know how to get	100.0	0.0	0.0	0.0	5.9	52.9	41.2	0.0
The thinking-planning induced as a result of your involvement with them	100.0	0.0	0.0	5.9	11.8	52.9	29.4	0.0
The idea exchange generated among the clients, i.e., what they learn from each other	100.0	0.0	0.0	5.9	44.1	41.2	8.8	0.0

TABLE 8. EDUCATION ASSISTANTS CLASSIFIED BY ESTIMATED FREQUENCY WITH WHICH SELECTED CONSTRAINTS OPERATE IN THEIR WORK WITH SMALL FARMERS

Constraint on Working with Small Farmers	Estimated Frequency of Occurrence						
	Total % (n=34)	Never %	Some-times %	Often %	Very Often %	Con-tinual %	No Answer %
Lack of information suited to small farmer needs	100.0	26.5	55.9	17.6	0.0	0.0	0.0
Inadequate method or means of getting information to farmers	100.0	52.9	44.2	0.0	2.9	0.0	0.0
Finding people at home	100.0	5.9	38.2	26.5	26.5	2.9	0.0
Own knowledge of how to motivate and work with people	100.0	29.4	50.1	14.7	2.9	0.0	2.9
Lack of interest and concern on the part of clients	100.0	14.7	61.8	23.5	0.0	0.0	0.0
Lack of time to get the needed work done	100.0	26.5	41.2	26.5	5.8	0.0	0.0
Own knowledge about questions farmers ask	100.0	17.6	64.7	14.8	0.0	0.0	2.9
Lack of guidance on how to proceed	100.0	50.0	47.1	0.0	0.0	0.0	2.9
Personal problems of clients	100.0	20.6	50.0	14.7	8.8	5.9	0.0
Lack of local support for the program	100.0	58.8	32.4	5.9	2.9	0.0	0.0
Lack of support from the regular extension staff	100.0	91.2	8.8	0.0	0.0	0.0	0.0
Local self interests that stand in the way	100.0	76.5	20.6	2.9	0.0	0.0	0.0
Lack of good information materials for the farmer himself to use	100.0	55.9	38.2	5.9	0.0	0.0	0.0

TABLE 9. EDUCATION ASSISTANTS CLASSIFIED BY NUMBER OF CONTACTS PER MONTH WITH DESIGNATED PERSONNEL IN THE DISTRICT

Kind of Personnel	Number of Contacts							
	Total	0	1-3	4-7	8-11	12-15	16 & over	Aver-age
Area directors	34	23	5	4	1	0	1	1.41
Farm management specialists	34	6	6	9	8	3	2	5.56
Agronomy specialists	34	7	15	7	3	2	0	3.00
Agricultural engineering specialists	34	25	6	2	1	0	0	0.82
Livestock specialists	34	6	16	6	2	3	1	3.65
Horticulatural specialists	34	32	2	0	0	0	0	0.19
Dairy specialists	34	29	5	0	0	0	0	0.29
Home resource management specialits	34	17	7	6	3	1	0	1.94
Food and nutrition specialists	34	30	1	1	1	0	1	0.85
Cloth and textile specialists	34	32	2	0	0	0	0	0.12
Youth specialists	34	30	1	3	0	0	0	0.44
Industrial and labor specialists	34	31	1	2	0	0	0	0.29
Government specialists	34	33	0	1	0	0	0	0.11
Other education assistants	34	0	4	4	12	6	8	10.59
Secretaries	34	7	3	12	9	1	2	5.15

TABLE 10. EDUCATION ASSISTANTS CLASSIFIED BY SERVICES EXPECTED, REQUESTED, AND OBTAINED FROM DISTRICT SUBJECT MATTER SPECIALISTS

Services That District Subject Matter Specialists Could Render	Whether Expected*		Whether Requested*		Whether Obtained*	
	Yes %	No %	Yes %	No %	Yes %	No %
Answers to your technical questions-- or searches leading to same	94.1	0.0	76.5	2.9	91.2	0.0
Prompt treatment of requests	94.1	0.0	73.5	5.9	82.4	2.9
On farm visits, if needed	91.2	2.9	67.6	11.8	79.4	2.9
Answers to technical questions on behalf of your clients	82.4	8.8	70.6	8.8	82.4	8.8
Communicate answers to questions directly to the client	67.6	20.6	67.6	14.7	67.6	17.6
Help demonstrate complex practices or procedures	85.3	2.9	61.8	17.6	67.6	8.8
Find solutions to personal problems	38.2	41.2	29.4	38.2	26.5	38.2
Listen to your field problems and give suggestions on how to proceed	91.2	0.0	79.4	2.9	82.4	0.0

*Percentages do not include those who failed to answer questions posed.

TABLE 11. EDUCATION ASSISTANTS CLASSIFIED BY REGULARITY OF INFORMATION SOURCES AND CHANNELS USED AND OWN ESTIMATE OF THEIR UTILITY

	Regularity of Use*				Estimated Utility*			
	Never %	Seldom %	Occasionally %	Regularly %	None %	Some %	Very %	Indispensable %
Sources								
Area farm management specialists	0.0	0.0	20.6	73.5	0.0	8.8	58.8	26.5
Area home economist	0.0	5.9	64.7	26.5	0.0	29.4	50.0	17.6
Area youth specialist	20.6	32.4	41.2	5.9	14.7	32.4	44.1	2.9
Other agricultural area specialists in technical agriculture, e.g. livestock, agronomy, engineering, entomology, etc.	0.0	0.0	61.8	32.4	0.0	8.8	47.1	29.4
Other area specialist (not in technical agriculture)	8.8	50.0	26.5	5.9	5.9	55.9	20.6	0.0
Other educational assistants	0.0	20.6	41.2	32.4	0.0	32.4	55.9	0.0
Government agencies, state, and/or federal	0.0	26.5	44.1	29.4	0.0	41.2	47.1	5.9
Small farmers with whom you work	2.9	14.7	47.1	35.3	5.9	38.2	35.3	14.7
Leading farmers in the area	2.9	14.7	61.8	20.6	5.9	35.3	38.2	14.7
Specialists at one or more of University of Missouri campuses	11.8	0.0	61.8	14.7	0.0	11.8	55.9	8.8

TABLE 11. Continued

	Regularity of Use*				Estimated Utility*			
	Never %	Seldom %	Occasion-ally %	Regu-larly %	None %	Some %	Very %	Indis-pensable %
Channels								
University (College of Agr.) publications	0.0	2.9	2.9	94.1	0.0	11.8	32.4	50.0
Agricultural Guide-sheets	0.0	0.0	8.8	88.2	2.9	8.8	41.2	38.2
Special Reports	0.0	0.0	35.3	61.8	2.9	17.6	47.1	23.5
Small Farm Guidesheet	0.0	0.0	20.6	76.5	2.9	8.8	38.2	38.2
Home Economics Guide series	0.0	11.8	35.3	52.9	5.9	23.5	44.1	20.6
Telephone calls	14.7	2.9	44.1	14.7	2.9	11.8	38.2	2.9
Personal face-to-face	8.8	8.8	52.9	11.8	2.9	8.8	50.0	5.9
Side band radio	44.1	0.0	5.9	5.9	14.7	8.8	8.8	0.0
CB radio	50.0	0.0	2.9	5.9	17.6	8.8	5.9	0.0
Cassettes	14.7	2.9	17.6	35.3	2.9	26.5	32.4	2.9
Newsletter	2.9	11.8	11.8	55.9	0.0	11.8	64.7	5.9
Missouri Farm News service	16.7	2.9	20.6	8.8	5.9	20.6	17.6	5.9
Farm magazine	5.9	14.7	47.1	32.4	5.9	50.0	38.2	0.0
Materials from private industry and/or business	14.7	32.4	50.0	12.9	17.6	55.9	17.6	5.9
Local small farmer newsletter	5.9	17.6	29.4	32.4	5.9	26.5	29.4	8.8
Local newspaper	5.9	29.4	38.2	23.5	5.9	55.9	23.5	2.9

*Percentages do not include those who failed to answer questions posed.

TABLE 12. EDUCATION ASSISTANTS CLASSIFIED BY PERCEIVED REACTION TO THE MISSOURI SMALL FARMER PROGRAM OF SELECTED REFERENTS

Referents	Perceived Reaction					
	Very Favorable	Favorable	Indifferent or mixed	Unfavorable	Very Unfavorable	No Answer
County extension councils	29.4	58.8	5.9	0.0	5.9	0.0
Area extension councils	26.5	52.9	5.9	0.0	2.9	11.8
County court	11.8	41.2	41.2	0.0	2.9	2.9
Big farmers	5.9	41.2	41.2	8.8	0.0	2.9
Small farmers	35.3	38.2	2.9	20.6	0.0	2.9
Local businessmen	17.6	47.1	28.5	5.9	2.9	2.9
Local newspaper	11.8	44.1	32.4	2.9	5.9	2.9
Extension colleagues not assigned to small farm programs	14.7	64.7	14.7	0.0	2.9	2.9
Local banks	17.6	47.1	17.6	2.9	0.0	2.9

TABLE 13. EDUCATION ASSISTANTS CLASSIFIED BY AMOUNT OF CHANGE IN DESIGNATED AREAS THEY PERCEIVE AS HAVING TAKEN PLACE IN THEIR CLIENTS

Areas	Total %* (n=34)	Now Compared to the Past		
		No Change %	A little More %	Much More %
Use of regular extension channels	100.0	0.0	41.2	35.3
Initiative in sizing up and solving own problems	100.0	2.9	55.9	17.6
Ability to make own decision	100.0	5.9	55.9	14.7
Husband-wife involvement in decision making	100.0	8.8	55.9	8.8
Interest in improving own situation	100.0	0.0	17.6	58.8
Self confidence	100.0	0.0	32.4	41.2
Involvement in community activities	100.0	2.9	52.9	5.9

*Unknowns excluded from the 100 percent total

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